

```
=> file biosis caba caplus embase japio lifesci medline scisearch
=> e vermeij paul/au
E1      1      VERMEIJ P CLAUDIA WIETEK/AU
E2      1      VERMEIJ P DR/AU
E3      35 --> VERMEIJ PAUL/AU
E4      106     VERMEIJ PIETER/AU
E5      1      VERMEIJ POST J/AU
E6      1      VERMEIJ POST JANINE/AU
E7      14     VERMEIJ R/AU
E8      18     VERMEIJ R J/AU
E9      6      VERMEIJ ROLF/AU
E10     1      VERMEIJ ROLF J/AU
E11     23     VERMEIJ RUDOLF J/AU
E12     1      VERMEIJ RUDOLF JACQUES/AU

=> s e1-e6 and lawsonia
L1      11 ("VERMEIJ P CLAUDIA WIETEK"/AU OR "VERMEIJ P DR"/AU OR "VERMEIJ
PAUL"/AU OR "VERMEIJ PIETER"/AU OR "VERMEIJ POST J"/AU OR "VERMEIJ
IJ POST JANINE"/AU) AND LAWSONIA

=> dup rem 11
PROCESSING COMPLETED FOR L1
L2      11 DUP REM L1 (0 DUPLICATES REMOVED)

=> d bib ab kwic 1-
YOU HAVE REQUESTED DATA FROM 11 ANSWERS - CONTINUE? Y/(N):y

L2      ANSWER 1 OF 11 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN
AN      2010:172480 BIOSIS <>LOGINID::20100916>>
DN      PREV201000172480
TI      ***Lawsonia*** intracellularis subunit vaccine.
AU      ***Vermeij, Paul*** [Inventor]; Anonymous
CS      St Anthonis, Netherlands
ASSIGNEE: Intarvet International B V
PI      US 07662390 20100216
SO      Official Gazette of the United States Patent and Trademark Office Patents,
(FEB 16 2010)
CODEN: OGUPE7. ISSN: 0098-1133.
DT      Patent
LA      English
ED      Entered STN: 24 Mar 2010
Last Updated on STN: 24 Mar 2010
AB      The present invention relates to nucleic acid sequences encoding novel
       ***Lawsonia*** intracellularis proteins. It furthermore relates to DNA
fragments, recombinant DNA molecules and live recombinant carriers
comprising these sequences. Also it relates to host cells comprising such
nucleic acid sequences, DNA fragments, recombinant DNA molecules and live
recombinant carriers. Moreover, the invention relates to proteins encoded
by these nucleotide sequences and to their use for the manufacturing of
vaccines. The invention also relates to vaccines for combating
       ***Lawsonia*** intracellularis infections and methods for the
preparation thereof. Finally the invention relates to diagnostic tests
for the detection of ***Lawsonia*** intracellularis DNA, the detection
of ***Lawsonia*** intracellularis antigens and of antibodies against
       ***Lawsonia*** intracellularis.
TI      ***Lawsonia*** intracellularis subunit vaccine.
AU      ***Vermeij, Paul*** [Inventor]; Anonymous
```

AB The present invention relates to nucleic acid sequences encoding novel ***Lawsonia*** intracellularis proteins. It furthermore relates to DNA fragments, recombinant DNA molecules and live recombinant carriers comprising these sequences. Also it. . . these nucleotide sequences and to their use for the manufacturing of vaccines. The invention also relates to vaccines for combating ***Lawsonia*** intracellularis infections and methods for the preparation thereof. Finally the invention relates to diagnostic tests for the detection of ***Lawsonia*** intracellularis DNA, the detection of ***Lawsonia*** intracellularis antigens and of antibodies against ***Lawsonia*** intracellularis.

IT Major Concepts
Pharmacology; Infection; Human Medicine (Medical Sciences)

IT Diseases
Lawsonia intracellularis infection: bacterial disease, prevention and control

IT Chemicals & Biochemicals
Lawsonia intracellularis subunit vaccine: immunologic-drug, immunostimulant-drug

L2 ANSWER 2 OF 11 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN
AN 2009:424780 BIOSIS <>LOGINID::20100916>>
DN PREV200900425883
TI ***Lawsonia*** intracellularis vaccine.
AU Jacobs, Antonius Arnoldus Christiaan [Inventor]; Anonymous;
Vermeij,
*** Paul*** [Inventor]
CS Boxmeer, Netherlands
ASSIGNEE: Intervet International B V
PI US 07491401 20090217
SO Official Gazette of the United States Patent and Trademark Office Patents, (FEB 10 2009)
CODEN: OGUPE7. ISSN: 0098-1133.
DT Patent
LA English
ED Entered STN: 15 Jul 2009
Last Updated on STN: 15 Jul 2009
AB The present invention relates i.a. to nucleic acid sequences encoding novel ***Lawsonia*** intracellularis proteins. It furthermore relates to DNA fragments, recombinant DNA molecules and live recombinant carriers comprising these sequences. Also it relates to host cells comprising such nucleic acid sequences, DNA fragments, recombinant DNA molecules and live recombinant carriers. Moreover, the invention relates to proteins encoded by these nucleotide sequences. The invention also relates to vaccines for combating ***Lawsonia*** intracellularis infections and methods for the preparation thereof. Finally the invention relates to diagnostic tests for the detection of ***Lawsonia*** intracellularis DNA, the detection of ***Lawsonia*** intracellularis antigens and of antibodies against ***Lawsonia*** intracellularis.
TI ***Lawsonia*** intracellularis vaccine.
AU Jacobs, Antonius Arnoldus Christiaan [Inventor]; Anonymous;
Vermeij,
*** Paul*** [Inventor]
AB The present invention relates i.a. to nucleic acid sequences encoding novel ***Lawsonia*** intracellularis proteins. It furthermore relates to DNA fragments, recombinant DNA molecules and live recombinant carriers comprising these sequences. Also it. . . carriers. Moreover, the invention relates to proteins encoded by these nucleotide sequences. The

invention also relates to vaccines for combating ***Lawsonia*** intracellularis infections and methods for the preparation thereof. Finally the invention relates to diagnostic tests for the detection of ***Lawsonia*** intracellularis DNA, the detection of ***Lawsonia*** intracellularis antigens and of antibodies against ***Lawsonia*** intracellularis.

IT Major Concepts
Pharmacology; Clinical Immunology (Human Medicine, Medical Sciences); Infection

IT Diseases
Lawsonia intracellularis infection: bacterial disease, drug therapy

IT Chemicals & Biochemicals
Lawsonia intracellularis vaccine: immunologic-drug, immunostimulant-drug, vaccine

L2 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN

AN 2009:1500289 CAPLUS <<LOGINID::20100916>>

DN 152:9929

TI Vaccine comprising carbohydrate composition from ***Lawsonia*** intracellularis cell membrane and combination vaccines comprising the same
IN Jacobs, Antonius Arnoldus Christiaan; ***Vermeij, Paul*** ; Segers, Ruud Philip Antoon Maria; Schrier, Carla Christina
PA Intervet International B.V., Neth.

SO PCT Int. Appl., 21 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2009144088	A2	20091203	WO 2009-EP54516	20090416
	WO 2009144088	A3	20100506		
	W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA				

PRAI EP 2008-154764 A 20080418

US 2008-46161P P 20080418

EP 2008-105738 A 20081106

US 2008-111756P P 20081106

AB The present invention pertains to the use of a non-live carbohydrate contg. compn., the carbohydrate being also found in live ***Lawsonia*** intracellularis cells in assocn. with the outer cell membrane of these cells, for the manuf. of a vaccine for protection against an infection with *L. intracellularis*, the vaccine being in a form suitable for systemic administration. The invention also pertains to a combination vaccine comprising *L. intracellularis* carbohydrate compn., and antigens from *Mycoplasma hyopneumoniae* and *Porcine circovirus*.

TI Vaccine comprising carbohydrate composition from ***Lawsonia*** intracellularis cell membrane and combination vaccines comprising the same

IN Jacobs, Antonius Arnoldus Christiaan; ***Vermeij, Paul*** ; Segers, Ruud Philip Antoon Maria; Schrier, Carla Christina

AB The present invention pertains to the use of a non-live carbohydrate contg. compn., the carbohydrate being also found in live ***Lawsonia*** intracellularis cells in assocn. with the outer cell membrane of these cells, for the manuf. of a vaccine for protection. . .

ST vaccine carbohydrate ***Lawsonia*** intracellularis cell membrane; ***Lawsonia*** Mycoplasma Porcine circovirus combination vaccine

IT Oils

RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(Biodegradable; vaccine comprising carbohydrate compn. from ***Lawsonia*** intracellularis cell membrane and combination vaccines comprising same)

IT Paraffin oils

RL: AGR (Agricultural use); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(adjuvant comprises droplets of; vaccine comprising carbohydrate compn. from ***Lawsonia*** intracellularis cell membrane and combination vaccines comprising same)

IT ***Lawsonia*** intracellularis

(carbohydrate compn. from killed; vaccine comprising carbohydrate compn. from ***Lawsonia*** intracellularis cell membrane and combination vaccines comprising same)

IT Polysaccharides

RL: AGR (Agricultural use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(compn.; vaccine comprising carbohydrate compn. from ***Lawsonia*** intracellularis cell membrane and combination vaccines comprising same)

IT Livestock

Sus scrofa domestica

Swine

(enteritis or ileitis in; vaccine comprising carbohydrate compn. from ***Lawsonia*** intracellularis cell membrane and combination vaccines comprising same)

IT Biodegradable materials

(oil, adjuvant comprises droplets of; vaccine comprising carbohydrate compn. from ***Lawsonia*** intracellularis cell membrane and combination vaccines comprising same)

IT Emulsions

(oil-in-water, as adjuvant; vaccine comprising carbohydrate compn. from ***Lawsonia*** intracellularis cell membrane and combination vaccines comprising same)

IT Carbohydrates

RL: AGR (Agricultural use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(protein free compn.; vaccine comprising carbohydrate compn. from ***Lawsonia*** intracellularis cell membrane and combination vaccines comprising same)

IT Immunization

(vaccination; vaccine comprising carbohydrate compn. from

Lawsonia intracellularis cell membrane and combination vaccines
 comprising same)
 IT Cell membrane
 Enteritis
 Ileitis
 Immune adjuvants
 Mycoplasma hyopneumoniae
 Porcine circovirus
 Vaccines
 (vaccine comprising carbohydrate compn. from ***Lawsonia***
 intracellularis cell membrane and combination vaccines comprising same)

L2 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN
 AN 2009:1294282 CAPLUS <<LOGINID::20100916>>
 DN 151:446115
 TI Combination vaccine for protection against ***Lawsonia***
 intracellularis, Mycoplasma hyopneumoniae and porcine circo virus
 IN Jacobs, Antonius Arnoldus Christiaan; ***Vermeij, Paul*** ; Segers,
 Ruud Philip Antoon Maria; Schrier, Carla Christina
 PA Intervet International B.V., Neth.
 SO PCT Int. Appl., 23pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2009127684	A1	20091022	WO 2009-EP54517	20090416
	W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
PRAI	EP 2008-154765	A	20080418		
	US 2008-46188P	P	20080418		

AB The present invention pertains to a vaccine comprising in combination non-live antigens of ***Lawsonia*** intracellularis, of Mycoplasma hyopneumoniae and Porcine circo virus, and a pharmaceutically acceptable carrier. The invention also pertains to a kit comprising a first container having non-live antigens of ***Lawsonia*** intracellularis, one or more other containers having Mycoplasma hyopneumoniae and porcine circo virus antigens and instructions for mixing the antigens of ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae, and Porcine circo virus to formulate one combination vaccine suitable for systemic vaccination.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Combination vaccine for protection against ***Lawsonia***
 intracellularis, Mycoplasma hyopneumoniae and porcine circo virus

IN Jacobs, Antonius Arnoldus Christiaan; ***Vermeij, Paul*** ; Segers, Ruud Philip Antoon Maria; Schrier, Carla Christina

AB The present invention pertains to a vaccine comprising in combination non-live antigens of ***Lawsonia*** intracellularis, of Mycoplasma hyopneumoniae and Porcine circo virus, and a pharmaceutically acceptable carrier. The invention also pertains to a kit comprising a first container having non-live antigens of ***Lawsonia*** intracellularis, one or more other containers having Mycoplasma hyopneumoniae and porcine circo virus antigens and instructions for mixing the antigens of ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae, and Porcine circo virus to formulate one combination vaccine suitable for systemic vaccination.

ST vaccine combination ***Lawsonia*** Mycoplasma porcine circo virus

IT Paraffin oils
RL: AGR (Agricultural use); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(adjuvant comprises droplets of; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Medical goods
(biodegradable, oil, adjuvant comprises droplets of; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT ***Lawsonia*** intracellularis
(carbohydrate compn. from killed; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Carbohydrates
RL: AGR (Agricultural use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(carbohydrate-contg. compn. from outer cell membrane, ***Lawsonia*** antigen from; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Respiratory system disease
(chronic, M. hyopneumoniae-assocd.; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Mycoplasma hyopneumoniae
Porcine circovirus
Vaccines
(combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Antigens
RL: AGR (Agricultural use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(combination; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Biodegradable materials
(medical, oil, adjuvant comprises droplets of; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Immune adjuvants
(oil in water, contg. oil droplets of sub-micrometer size.; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Microemulsions
(oil-in-water, biodegradable oil-in-water, adjuvants; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Cell membrane
(outer, ***Lawsonia*** antigen from carbohydrate-contg. compn. from; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Disease, animal
(postweaning multisystemic wasting syndrome, porcine circo virus-assocd.; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Intestinal disease
(proliferative, L. intracellularis-assocd.; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Immunization
(vaccination, systemic; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Animalia
Animals
Sus scrofa domestica
Swine
(vaccination; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

L2 ANSWER 5 OF 11 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN
AN 2006:243704 BIOSIS <>LOGINID::20100916>>
DN PREV200600251697
TI ***Lawsonia*** intracellularis vaccine.
AU Jacobs, Antonius Arnoldus Christiaan [Inventor]; ***Vermeij, Paul***
[Inventor]
CS Kessel, Netherlands
ASSIGNEE: Akzo Nobel N.V.
PI US 06921536 20050726
SO Official Gazette of the United States Patent and Trademark Office Patents,
(JUL 26 2005)
CODEN: OGUPE7. ISSN: 0098-1133.
DT Patent
LA English
ED Entered STN: 26 Apr 2006
Last Updated on STN: 26 Apr 2006
AB The present invention relates i.a. to nucleic acid sequences encoding novel ***Lawsonia*** intracellularis proteins. It furthermore relates to DNA fragments, recombinant DNA molecules and live recombinant carriers comprising these sequences. Also it relates to host cells comprising such nucleic acid sequences, DNA fragments, recombinant DNA molecules and live recombinant carriers. Moreover, the invention relates to proteins encoded by these nucleotide sequences. The invention also relates to vaccines for combating ***Lawsonia*** intracellularis infections and methods for the preparation thereof. Finally the invention relates to diagnostic tests for the detection of ***Lawsonia*** intracellularis DNA, the detection of ***Lawsonia*** intracellularis antigens and of antibodies against ***Lawsonia*** intracellularis.

TI ***Lawsonia*** intracellularis vaccine.
AU Jacobs, Antonius Arnoldus Christiaan [Inventor]; ***Vermeij, Paul***
 [Inventor]
AB The present invention relates i.a. to nucleic acid sequences encoding novel ***Lawsonia*** intracellularis proteins. It furthermore relates to DNA fragments, recombinant DNA molecules and live recombinant carriers comprising these sequences. Also it. . . carriers. Moreover, the invention relates to proteins encoded by these nucleotide sequences. The invention also relates to vaccines for combating ***Lawsonia*** intracellularis infections and methods for the preparation thereof. Finally the invention relates to diagnostic tests for the detection of ***Lawsonia*** intracellularis DNA, the detection of ***Lawsonia*** intracellularis antigens and of antibodies against ***Lawsonia*** intracellularis.
IT Major Concepts
 Pharmacology; Clinical Immunology (Human Medicine, Medical Sciences);
 Infection; Clinical Chemistry (Allied Medical Sciences)
IT Diseases
 Lawsonia intracellularis infection: bacterial disease,
 diagnosis
IT Chemicals & Biochemicals
 Lawsonia intracellularis vaccine: immunologic-drug,
 immunostimulant-drug, vaccine
IT Methods & Equipment
 Lawsonia intracellularis vaccine preparation method:
 laboratory techniques; ***Lawsonia*** intracellularis DNA detection
 method: laboratory techniques, diagnostic techniques, clinical
 techniques; ***Lawsonia*** intracellularis antigen detection
 method: laboratory techniques, diagnostic techniques, clinical
 techniques; ***Lawsonia*** intracellularis antibody detection
 method: laboratory techniques, diagnostic techniques, clinical
 techniques
ORGN Classifier
 Facultatively Anaerobic Gram-Negative Rods 06700
Super Taxa
 Eubacteria; Bacteria; Microorganisms
Organism Name
 Lawsonia intracellularis (species)
Taxa Notes
 Bacteria, Eubacteria, Microorganisms

L2 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN
AN 2005:696935 CAPLUS <<LOGINID::20100916>>
DN 143:192288
TI DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic
 proteins, their sequences and use in manufacturing of pig vaccines against
 L. intracellularis
IN ***Vermeij, Paul***
PA Akzo Nobel N. V., Neth.
SO PCT Int. Appl., 99 pp.
 CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1
 PATENT NO. KIND DATE APPLICATION NO. DATE
----- ----- ----- ----- -----
PI WO 2005070958 A2 20050804 WO 2005-EP562 20050118

WO 2005070958	A3	20051124		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, SM			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2005206291	A1	20050804	AU 2005-206291	20050118
AU 2005206291	B2	20100603		
CA 2554472	A1	20050804	CA 2005-2554472	20050118
EP 1709067	A2	20061011	EP 2005-701094	20050118
EP 1709067	B1	20100609		
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS			
BR 2005007017	A	20070605	BR 2005-7017	20050118
JP 2007537721	T	20071227	JP 2006-550044	20050118
AT 470673	T	20100615	AT 2005-701094	20050118
MX 2006008217	A	20070523	MX 2006-8217	20060719
KR 2006134054	A	20061227	KR 2006-715908	20060807
US 20090053228	A1	20090226	US 2008-587067	20081105
PRAI EP 2004-100202	A	20040122		
EP 2004-100203	A	20040122		
EP 2004-100204	A	20040122		
EP 2004-100205	A	20040122		
EP 2004-100206	A	20040122		
EP 2004-100208	A	20040122		
EP 2004-100209	A	20040122		
EP 2004-100210	A	20040122		
EP 2004-100211	A	20040122		
WO 2005-EP562	W	20050118		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The invention provides DNA mols. and polypeptides of various ***Lawsonia*** intracellularis immunogenic proteins that were demonstrated to bind to polyclonal pig and chicken serum. The invention relates that said immunogenic proteins possessed mol. wts. of 75-kilodaltons (kDa), 27-kDa, 62-kDa, 57-kDa, 74-kDa, 44-kDa, 43-kDa, 26/31-kDa and 101-KDa, based on SDS-PAGE gel electrophoresis. The invention also provides for the use of said DNA mols. and polypeptides in manufg. of a vaccine for combating *L. intracellularis* infections in pigs by inducing humoral immunity. The invention further provides antibodies specific for said *L. intracellularis* immunogenic proteins, their detection and their use in manufg. of a vaccine and/or in diagnosis. Still further, the invention provides a vaccine comprising said *L. intracellularis* DNA mols. and polypeptides and an addnl. antigen derived from pig pathogens, such as viruses and/or microorganisms. Finally, the invention provides the DNA and amino acid sequences of said *L. intracellularis* immunogenic proteins. In the examples, the invention demonstrated that pigs immunized with a recombinant vaccine composed of disclosed 75-kDa, 44-kDa, 26/31-kDa and 27-kDa immunogenic proteins were protected against an *L. intracellularis* challenge.

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
 TI DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic

proteins, their sequences and use in manufacturing of pig vaccines against L. intracellularis

IN ***Vermeij, Paul***

AB The invention provides DNA mols. and polypeptides of various ***Lawsonia*** intracellularis immunogenic proteins that were demonstrated to bind to polyclonal pig and chicken serum. The invention relates that said immunogenic. . .

ST DNA sequence immunogenic protein gene ***Lawsonia*** use vaccine; ***Lawsonia*** antigen sequence recombinant prodn use vaccine diagnosis; antibody anti ***Lawsonia*** antigen use diagnosis vaccine manuf; pig humoral immunity ***Lawsonia*** immunogenic protein vaccine

IT Antigens
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(101-kilodalton; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(2008; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT Antigens
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(26/31-kilodalton; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)

IT Antigens
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(27-kilodalton; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(3123; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT Antigens
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(43-kilodalton; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)

IT Gene, microbial

RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(4320; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT Antigens
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(44-kilodalton; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(4423; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(5074; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(5293; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(5464; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(5473; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(5669; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT Antigens
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(57-kilodalton; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)

IT	Antigens RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses) (62-kilodalton; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)
IT	Antigens RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses) (74-kilodalton; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)
IT	Antigens RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses) (75-kilodalton; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)
IT	DNA sequences ***Lawsonia*** intracellularis Protein sequences (DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)
IT	Vaccines (DNA and protein; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)
IT	Molecular cloning (***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)
IT	Promoter (genetic element) RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)
IT	Immunostimulants (adjuvants, of vaccine; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)
IT	Antibodies and Immunoglobulins RL: ANT (Analyte); ARG (Analytical reagent use); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (anti-L.intracellularis antigen-specific; antibodies specific for ***Lawsonia*** intracellularis immunogenic proteins, their detection, diagnostic use and use in manufg. of vaccine)
IT	Actinobacillus pleuropneumoniae

Bordetella bronchiseptica
Brachyspira hyodysenteriae
Erysipelothrix rhusiopathiae
Haemophilus parasuis
Mycoplasma hyopneumoniae
Pasteurella multocida
Porcine parvovirus
Porcine transmissible gastroenteritis virus
Pseudorabies virus
Rotavirus
Salmonella choleraesuis
Streptococcus suis
Swine influenza virus
(antigen from; vaccines composed of ***Lawsonia*** intracellularis immunogenic proteins and/or DNA encoding said proteins, and antigens from various pig pathogens, such as)

IT Antigens
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(from various pig pathogens; vaccines composed of ***Lawsonia*** intracellularis immunogenic proteins and/or DNA encoding said proteins, and antigens from various pig pathogens, such as)

IT Immunity
(humoral; pigs immunized with vaccine composed of ***Lawsonia*** intracellularis 75-kDa, 44-kDa, 26/31-kDa and 27-kDa immunogenic proteins protected against challenge with L. intracellularis)

IT Diagnosis
(immunodiagnosis, using antibodies; antibodies specific for ***Lawsonia*** intracellularis immunogenic proteins, their detection,
diagnostic use and use in manufg. of vaccine)

IT Sus scrofa domestica
(pigs immunized with vaccine composed of ***Lawsonia*** intracellularis 75-kDa, 44-kDa, 26/31-kDa and 27-kDa immunogenic proteins protected against challenge with L. intracellularis)

IT Intestine, disease
(porcine proliferative; pigs immunized with vaccine composed of ***Lawsonia*** intracellularis 75-kDa, 44-kDa, 26/31-kDa and 27-kDa immunogenic proteins protected against challenge with L. intracellularis)

IT Escherichia coli
(transformed; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)

IT Immunization
(vaccination; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT 861866-19-5P 861866-21-9P 861866-23-1P 861866-25-3P 861866-27-5P
861866-29-7P 861866-31-1P 861866-34-4P 861866-36-6P
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(amino acid sequence; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)

IT 861866-20-8 861866-22-0 861866-24-2 861866-26-4 861866-28-6
 861866-30-0 861866-32-2 861866-33-3 861866-35-5
 RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (nucleotide sequence; DNA and polypeptides of ***Lawsonia***
 intracellularis immunogenic proteins, their sequences and use in
 manufg. of vaccines against L. intracellularis)
 IT 861867-47-2
 RL: PRP (Properties)
 (unclaimed nucleotide sequence; dNA and polypeptides of
 Lawsonia intracellularis immunogenic proteins, their sequences
 and use in manufg. of pig vaccines against L. intracellularis)
 IT 861867-48-3 861867-49-4 861867-50-7 861867-51-8 861867-52-9
 861867-53-0 861867-54-1 861867-55-2 861867-56-3 861867-57-4
 861867-58-5 861867-59-6 861867-60-9 861867-61-0 861867-62-1
 861867-63-2 861867-64-3
 RL: PRP (Properties)
 (unclaimed sequence; dNA and polypeptides of ***Lawsonia***
 intracellularis immunogenic proteins, their sequences and use in
 manufg. of pig vaccines against L. intracellularis)

L2 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN

AN 2005:547615 CAPLUS <>LOGINID::20100916>>

DN 143:76807

TI ***Lawsonia*** intracellularis 26 kDa subunit vaccine

IN ***Vermeij, Paul***

PA Akzo Nobel N. V., Neth.

SO PCT Int. Appl., 32 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005056586	A1	20050623	WO 2004-EP53342	20041208
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU	2004297018	A1	20050623	AU 2004-297018	20041208
CA	2548750	A1	20050623	CA 2004-2548750	20041208
EP	1694698	A1	20060830	EP 2004-820075	20041208
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS				
BR	2004017440	A	20070306	BR 2004-17440	20041208
JP	2007537715	T	20071227	JP 2006-543544	20041208
US	20070212373	A1	20070913	US 2006-580709	20060525
MX	2006006282	A	20061211	MX 2006-6282	20060602
CN	101124241	A	20080213	CN 2004-80036743	20060609
KR	2006112674	A	20061101	KR 2006-713035	20060629

PRAI EP 2003-104603 A 20031209
WO 2004-EP53342 W 20041208

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The present invention relates to nucleic acids encoding novel L. intracellularis proteins. It furthermore relates to DNA fragments, recombinant DNA mols., and live recombinant carriers comprising these sequences. It also relates to host cells comprising such nucleic acids, DNA fragments, recombinant DNA mols., and live recombinant carriers. Moreover, the invention relates to proteins encoded by these nucleotide sequences and to their use for the manufg. of vaccines for combating L. intracellularis infections and methods for the prepn. thereof. Finally the invention relates to diagnostic tests for the detection of L. intracellularis antigens and of antibodies against L. intracellularis.

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI ***Lawsonia*** intracellularis 26 kDa subunit vaccine

IN ***Vermeij, Paul***

ST ***Lawsonia*** subunit vaccine sequence infection diagnosis; DNA sequence 26 kilodalton protein ***Lawsonia***

IT Proteins
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(26 kDa; ***Lawsonia*** intracellularis subunit vaccine sequences, vaccine prepn. and use in pigs, and diagnostic test for detection of ***Lawsonia*** antibodies and antigens)

IT Actinobacillus pleuropneumoniae
Bordetella bronchiseptica
Brachyspira hyodysenteriae
Erysipelothrix rhusiopathiae
Escherichia coli
Haemophilus parasuis
Mycoplasma hyopneumoniae
Pasteurella multocida
Porcine parvovirus
Porcine transmissible gastroenteritis virus
Pseudorabies virus
Rotavirus
Salmonella cholerasuis
Streptococcus suis
Swine influenza virus
(***Lawsonia*** intracellularis subunit vaccine contg. addnl. microorganism antigens and use thereof in pigs)

IT Animal virus
Blood analysis
DNA sequences
Diagnosis
Lawsonia intracellularis
Microorganism
Protein sequences
Sus scrofa domestica
Vaccines
(***Lawsonia*** intracellularis subunit vaccine sequences, vaccine prepn. and use in pigs, and diagnostic test for detection of ***Lawsonia*** antibodies and antigens)

IT Antibodies and Immunoglobulins

Antigens
RL: ANT (Analyte); ANST (Analytical study)
(***Lawsonia*** intracellularis subunit vaccine sequences, vaccine prepn. and use in pigs, and diagnostic test for detection of ***Lawsonia*** antibodies and antigens)

IT DNA
Nucleic acids
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(***Lawsonia*** intracellularis subunit vaccine sequences, vaccine prepn. and use in pigs, and diagnostic test for detection of ***Lawsonia*** antibodies and antigens)

IT Promoter (genetic element)
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(***Lawsonia*** intracellularis subunit vaccine sequences, vaccine prepn. and use in pigs, and diagnostic test for detection of ***Lawsonia*** antibodies and antigens)

IT Immunostimulants
(adjuvants; ***Lawsonia*** intracellularis subunit vaccine sequences, vaccine prepn. and use in pigs, and diagnostic test for detection of ***Lawsonia*** antibodies and antigens)

IT Drug delivery systems
(carriers; ***Lawsonia*** intracellularis subunit vaccine sequences, vaccine prepn. and use in pigs, and diagnostic test for detection of ***Lawsonia*** antibodies and antigens)

IT Diagnosis
(serodiagnosis; ***Lawsonia*** intracellularis subunit vaccine sequences, vaccine prepn. and use in pigs, and diagnostic test for detection of ***Lawsonia*** antibodies and antigens)

IT 854792-42-0
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(amino acid sequence; ***Lawsonia*** intracellularis subunit vaccine contg. addnl. microorganism antigens and use thereof in pigs)

IT 854792-41-9
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(nucleotide sequence; ***Lawsonia*** intracellularis subunit vaccine contg. addnl. microorganism antigens and use thereof in pigs)

IT 854793-33-2 854793-34-3
RL: PRP (Properties)
(unclaimed sequence; ***lawsonia*** intracellularis 26 kDa subunit vaccine)

L2 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN
AN 2005:260093 CAPLUS <>LOGINID::20100916>>
DN 142:334910
TI ***Lawsonia*** intracellularis subunit vaccine for treatment of porcine proliferative enteropathy in pigs
IN ***Vermeij, Paul***
PA Akzo Nobel N.V., Neth.
SO PCT Int. Appl., 55 pp.
CODEN: PIXXD2
DT Patent
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005026200	A2	20050324	WO 2004-EP9995	20040908
	WO 2005026200	A3	20050623		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2004272246	A1	20050324	AU 2004-272246	20040908
	CA 2536989	A1	20050324	CA 2004-2536989	20040908
	EP 1664100	A2	20060607	EP 2004-764938	20040908
	EP 1664100	B1	20091202		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
	CN 1849334	A	20061018	CN 2004-80026174	20040908
	BR 2004013857	A	20061024	BR 2004-13857	20040908
	JP 2007527706	T	20071004	JP 2006-525752	20040908
	AT 450545	T	20091215	AT 2004-764938	20040908
	ES 2335668	T3	20100331	ES 2004-764938	20040908
	US 20060286118	A1	20061221	US 2006-571490	20060309
	US 7662390	B2	20100216		
	MX 2006002850	A	20060614	MX 2006-2850	20060310
	KR 2006129163	A	20061215	KR 2006-704981	20060310
PRAI	EP 2003-77861	A	20030912		
	WO 2004-EP9995	W	20040908		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The present invention relates to nucleic acid sequences encoding novel ***Lawsonia*** intracellularis proteins. It furthermore relates to DNA fragments, recombinant DNA mols., and live recombinant carriers comprising these sequences. Also, it relates to host cells comprising such nucleic acid sequences, DNA fragments, recombinant DNA mols., and live recombinant carriers. Moreover, the invention relates to proteins encoded by these nucleotide sequences and to their use for the manufg. of vaccines. The invention also relates to vaccines for combating *L. intracellularis* infections and methods for the prepn. thereof. Finally the invention relates to diagnostic tests for the detection of *L. intracellularis* DNA, the detection of *L. intracellularis* antigens, and of antibodies against *L. intracellularis*. The example presented relates to cloning of ***Lawsonia*** genes in T7-based expression vectors, expression of ***Lawsonia*** genes from T7 promoter in *Escherichia coli*, and anal. of expression products by western blot.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI ***Lawsonia*** intracellularis subunit vaccine for treatment of porcine proliferative enteropathy in pigs

IN ***Vermeij, Paul***

AB The present invention relates to nucleic acid sequences encoding novel ***Lawsonia*** intracellularis proteins. It furthermore relates to DNA fragments, recombinant DNA mols., and live recombinant carriers comprising

these sequences. Also, it. . . DNA, the detection of L. intracellularis antigens, and of antibodies against L. intracellularis. The example presented relates to cloning of ***Lawsonia*** genes in T7-based expression vectors, expression of ***Lawsonia*** genes from T7 promoter in Escherichia coli, and anal. of expression products by western blot.

- ST ***Lawsonia*** subunit vaccine pig proliferative enteropathy; sequence
 Lawsonia subunit vaccine
- IT Diagnosis
 (***Lawsonia*** intracellularis DNA, antigens, and antibodies
 detection for infection diagnosis in pigs)
- IT Actinobacillus pleuropneumoniae
 Bordetella bronchiseptica
 DNA sequences
 Erysipelothrix rhusiopathiae
 Escherichia coli
 Haemophilus parasuis
 Lawsonia intracellularis
 Mycoplasma hyopneumoniae
 Pasteurella multocida
 Porcine parvovirus
 Porcine transmissible gastroenteritis virus
 Protein sequences
 Pseudorabies virus
 Rotavirus
 Salmonella cholerasius
 Streptococcus suis
 Sus scrofa domestica
 Swine influenza virus
 Vaccines
 (***Lawsonia*** intracellularis subunit vaccine for treatment of
 porcine proliferative enteropathy in pigs)
- IT Antibodies and Immunoglobulins
 RL: ANT (Analyte); ANST (Analytical study)
 (***Lawsonia*** intracellularis subunit vaccine for treatment of
 porcine proliferative enteropathy in pigs)
- IT Promoter (genetic element)
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (***Lawsonia*** intracellularis subunit vaccine for treatment of
 porcine proliferative enteropathy in pigs)
- IT Immunostimulants
 (adjuvants; ***Lawsonia*** intracellularis subunit vaccine for
 treatment of porcine proliferative enteropathy in pigs)
- IT Drug delivery systems
 (carriers; ***Lawsonia*** intracellularis subunit vaccine for
 treatment of porcine proliferative enteropathy in pigs)
- IT DNA
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (fragments, live recombinant carriers; ***Lawsonia***
 intracellularis subunit vaccine for treatment of porcine proliferative
 enteropathy in pigs)
- IT Antigens
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (microbial; ***Lawsonia*** intracellularis subunit vaccine for
 treatment of porcine proliferative enteropathy in pigs)

IT Intestine, disease
 (porcine proliferative enteropathy; ***Lawsonia*** intracellularis DNA, antigens, and antibodies detection for infection diagnosis in pigs)
 IT Diagnosis
 (serodiagnosis; ***Lawsonia*** intracellularis DNA, antigens, and antibodies detection for infection diagnosis in pigs)
 IT 848387-35-9 848387-37-1 848452-45-9 848452-47-1 848452-49-3
 848452-51-7
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
 (amino acid sequence; ***Lawsonia*** intracellularis DNA, antigens, and antibodies detection for infection diagnosis in pigs)
 IT 848387-34-8 848387-36-0 848452-44-8 848452-46-0 848452-48-2
 848452-50-6
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
 (nucleotide sequence; ***Lawsonia*** intracellularis DNA, antigens, and antibodies detection for infection diagnosis in pigs)
 IT 848452-52-8 848452-53-9 848452-54-0 848452-55-1 848452-56-2
 848452-57-3 848452-58-4 848452-59-5 848452-60-8 848452-61-9
 848452-62-0 848452-63-1
 RL: PRP (Properties)
 (unclaimed sequence; ***Lawsonia*** intracellularis subunit vaccine for treatment of porcine proliferative enteropathy in pigs)

L2 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN

AN 2002:503432 CAPLUS <<LOGINID::20100916>>

DN 137:77871

TI Cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and their use in preparing vaccines for porcine proliferative enteropathy

IN Jacobs, Antonius A. C.; ***Vermeij, Paul***

PA Akzo Nobel N.V., Neth.; Intervet International BV

SO Eur. Pat. Appl., 26 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1219711	A2	20020703	EP 2001-204919	20011214
	EP 1219711	A3	20021106		
	EP 1219711	B1	20060614		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	EP 1586646	A2	20051019	EP 2005-104073	20011214
	EP 1586646	A3	20070801		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
	AT 330013	T	20060715	AT 2001-204919	20011214
	PT 1219711	E	20061031	PT 2001-204919	20011214
	ES 2266090	T3	20070301	ES 2001-204919	20011214
	CA 2365494	A1	20020620	CA 2001-2365494	20011218
	JP 2003000276	A	20030107	JP 2001-385373	20011219
	JP 4237960	B2	20090311		
	HU 2001005379	A2	20030128	HU 2001-5379	20011219

HU 2001005379	A3	20040728		
AU 2001097371	A	20020627	AU 2001-97371	20011220
AU 783210	B2	20051006		
US 20050069559	A1	20050331	US 2001-34500	20011220
US 6921536	B2	20050726		
US 20050250150	A1	20051110	US 2005-180997	20050713
US 7491401	B2	20090217		
PH 1200600523	A	20080519	PH 2006-1200600523	20061107
PRAI EP 2000-204660	A	20001220		
EP 2001-204919	A3	20011214		
US 2001-34500	A3	20011220		
US 2005-102182	B3	20050408		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The present invention relates i.a. to nucleic acid sequences encoding novel ***Lawsonia*** intracellularis proteins. It furthermore relates to DNA fragments, recombinant DNA mols. and live recombinant carriers comprising these sequences. Also it relates to host cells comprising such nucleic acid sequences, DNA fragments, recombinant DNA mols. and live recombinant carriers. Moreover, the invention relates to proteins encoded by these nucleotide sequences. The invention also relates to vaccines for combating ***Lawsonia*** intracellularis infections and methods for the prepn. thereof. Finally the invention relates to diagnostic tests for the detection of ***Lawsonia*** intracellularis DNA, the detection of ***Lawsonia*** intracellularis antigens and of antibodies against ***Lawsonia*** intracellularis.

OSC.G 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and their use in preparing vaccines for porcine proliferative enteropathy

IN Jacobs, Antonius A. C.; ***Vermeij, Paul***

AB The present invention relates i.a. to nucleic acid sequences encoding novel ***Lawsonia*** intracellularis proteins. It furthermore relates to DNA fragments, recombinant DNA mols. and live recombinant carriers comprising these sequences. Also it. . . carriers. Moreover, the invention relates to proteins encoded by these nucleotide sequences. The invention also relates to vaccines for combating ***Lawsonia*** intracellularis infections and methods for the prepn. thereof. Finally the invention relates to diagnostic tests for the detection of ***Lawsonia*** intracellularis DNA, the detection of ***Lawsonia*** intracellularis antigens and of antibodies against ***Lawsonia*** intracellularis.

ST ***Lawsonia*** outer membrane protein gene sequence; Porcine proliferative enteropathy vaccine ***Lawsonia*** outer membrane protein gene; recombinant bacteria ***Lawsonia*** outer membrane protein gene expression vaccine

IT Eubacteria
 (***Lawsonia*** OMP protein expression host; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Proteins
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (OMP (outer membrane protein), 19/21 kDa, of ***Lawsonia*** intracellularis; cloning of genes for novel ***Lawsonia***

intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Proteins
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(OMP (outer membrane protein), 37 kDa, of ***Lawsonia*** intracellularis; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Proteins
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(OMP (outer membrane protein), 50 kDa, of ***Lawsonia*** intracellularis; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT *Actinobacillus pleuropneumoniae*
Animal virus
Bordetella bronchiseptica
Erysipelothrix rhusiopathiae
Escherichia coli
Haemophilus parasuis
Mycoplasma hyopneumoniae
Pasteurella multocida
Porcine parvovirus
Porcine transmissible gastroenteritis virus
Pseudorabies virus
Rotavirus
Salmonella cholerasuis
Streptococcus suis
Swine influenza virus
(addnl. antigens of ***Lawsonia*** vaccines derived from; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Immunostimulants
(adjuvants, for ***Lawsonia*** OMP protein related vaccines; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Infection
(bacterial, of ***Lawsonia*** intracellularis; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Drug delivery systems
(carriers, for ***Lawsonia*** OMP protein related vaccines; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT DNA sequences
Lawsonia intracellularis
Molecular cloning
Protein sequences
(cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative

enteropathy)

IT Gene, microbial
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (for OMP (outer membrane protein), of ***Lawsonia*** intracellularis; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Vaccines
(for porcine proliferative enteropathy (PPE); cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Promoter (genetic element)
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(in regulation of recombinant ***Lawsonia*** OMP protein; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Diagnosis
(mol., of ***Lawsonia*** intracellularis infection or PPE; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Antigens
RL: BPN (Biosynthetic preparation); DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(of ***Lawsonia*** outer membrane proteins; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Microorganism
(pathogenic to pigs, addnl. antigens of ***Lawsonia*** vaccines derived from; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Intestine, disease
(porcine proliferative enteropathy (PPE); cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Antiseraums
(to ***Lawsonia*** outer membrane proteins, from rabbit; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Antibodies and Immunoglobulins
RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(to ***Lawsonia*** outer membrane proteins; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Sus scrofa domestica
(vaccines for; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT 439914-48-4P 439914-50-8P 439914-52-0P
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL

(Biological study); PREP (Preparation); USES (Uses)
(amino acid sequence of 19/21 kDa OMP protein internal peptide; cloning
of genes for novel ***Lawsonia*** intracellularis outer membrane
proteins and use in prepg. vaccines for porcine proliferative
enteropathy)

IT 440005-72-1P 440005-74-3P
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);
DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL
(Biological study); PREP (Preparation); USES (Uses)
(amino acid sequence; cloning of genes for novel ***Lawsonia***
intracellularis outer membrane proteins and use in prepg. vaccines for
porcine proliferative enteropathy)

IT 440005-71-0 440005-73-2
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleotide sequence; cloning of genes for novel ***Lawsonia***
intracellularis outer membrane proteins and use in prepg. vaccines for
porcine proliferative enteropathy)

IT 440016-39-7 440016-40-0 440016-41-1 440016-42-2 440016-43-3
440016-44-4 440016-45-5

RL: PRP (Properties)
(unclaimed nucleotide sequence; cloning of genes for novel
Lawsonia intracellularis outer membrane proteins and their use
in prepg. vaccines for porcine proliferative enteropathy)

IT 439914-54-2 439914-56-4 439914-57-5 439914-59-7 439914-63-3
439914-65-5 439914-67-7 439914-71-3 439914-73-5 439914-75-7
439914-77-9 439914-79-1 439914-82-6 439914-87-1

RL: PRP (Properties)
(unclaimed sequence; cloning of genes for novel ***Lawsonia***
intracellularis outer membrane proteins and their use in prepg.
vaccines for porcine proliferative enteropathy)

L2 ANSWER 10 OF 11 JAPIO (C) 2010 JPO on STN
AN 2003-000276 JAPIO <<LOGINID::20100916>>

TI ***LAWSONIA*** INTRACELLULIS VACCINE

IN JACOBS ANTONIUS ARNOLDUS C; ***VERMEIJ PAUL***

PA AKZO NOBEL NV

PI JP 2003000276 A 20030107 Heisei

AI JP 2001-385373 (JP2001385373 Heisei) 20011219

PRAI EP 2000-204660 20001220

SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 2003

AB PROBLEM TO BE SOLVED: To develop methods for diagnosing, preventing and
treating swine proliferative intestinal diseases.

SOLUTION: This invention relates to nucleic acid sequences encoding novel
Lawsonia intracellularis proteins. It furthermore relates to DNA
fragments, recombinant DNA molecules and live recombinant carriers
comprising these sequences. Also it relates to host cells comprising such
nucleic acid sequences, DNA fragments, recombinant DNA molecules and live
recombinant carriers. Moreover, the invention relates to proteins encoded
with these nucleotide sequences. The invention also relates to vaccines
for combating ***Lawsonia*** intracellularis infections and methods
for the preparation thereof. Finally, the invention relates to diagnostic
tests for the detection of ***Lawsonia*** intracellularis DNA, the
detection of ***Lawsonia*** intracellularis antigens and of antibodies
against ***Lawsonia*** intracellularis.

COPYRIGHT: (C)2003,JPO

TI ***LAWSONIA*** INTRACELLULIS VACCINE

IN JACOBS ANTONIUS ARNOLDUS C; ***VERMEIJ PAUL***
AB . . . methods for diagnosing, preventing and treating swine
proliferative intestinal diseases.
SOLUTION: This invention relates to nucleic acid sequences encoding novel
Lawsonia intracellularis proteins. It furthermore relates to DNA
fragments, recombinant DNA molecules and live recombinant carriers
comprising these sequences. Also it. . . carriers. Moreover, the
invention relates to proteins encoded with these nucleotide sequences. The
invention also relates to vaccines for combating ***Lawsonia***
intracellularis infections and methods for the preparation thereof.
Finally, the invention relates to diagnostic tests for the detection of
Lawsonia intracellularis DNA, the detection of ***Lawsonia***
intracellularis antigens and of antibodies against ***Lawsonia***
intracellularis.
COPYRIGHT: (C)2003, JPO

L2 ANSWER 11 OF 11 LIFESCI COPYRIGHT 2010 CSA on STN
AN 2010:177502 LIFESCI
TI ***Lawsonia*** intracellularis subunit vaccine
AU ***Vermeij, Paul***
DT Patent
FS N; A; J
LA English
AB The present invention relates to nucleic acid sequences encoding novel
Lawsonia intracellularis proteins. It furthermore relates to DNA
fragments, recombinant DNA molecules and live recombinant carriers
comprising these sequences. Also it relates to host cells comprising such
nucleic acid sequences, DNA fragments, recombinant DNA molecules and live
recombinant carriers. Moreover, the invention relates to proteins encoded
by these nucleotide sequences and to their use for the manufacturing of
vaccines. The invention also relates to vaccines for combating
Lawsonia intracellularis infections and methods for the
preparation thereof. Finally the invention relates to diagnostic tests for
the detection of ***Lawsonia*** intracellularis DNA, the detection of
Lawsonia intracellularis antigens and of antibodies against
Lawsonia intracellularis.
TI ***Lawsonia*** intracellularis subunit vaccine
AU ***Vermeij, Paul***
AB The present invention relates to nucleic acid sequences encoding novel
Lawsonia intracellularis proteins. It furthermore relates to DNA
fragments, recombinant DNA molecules and live recombinant carriers
comprising these sequences. Also it. . . these nucleotide sequences and
to their use for the manufacturing of vaccines. The invention also relates
to vaccines for combating ***Lawsonia*** intracellularis infections
and methods for the preparation thereof. Finally the invention relates to
diagnostic tests for the detection of ***Lawsonia*** intracellularis
DNA, the detection of ***Lawsonia*** intracellularis antigens and of
antibodies against ***Lawsonia*** intracellularis.
UT Antibodies; DNA; Infection; Nucleotide sequence; Vaccines; nucleic acids;
Lawsonia ; ***Lawsonia*** intracellularis

=> s lawsonia and intracellularis and vaccin?
L3 197 LAWSONIA AND INTRACELLULARIS AND VACCIN?

=> dup rem 13
PROCESSING COMPLETED FOR L3

L4 122 DUP REM L3 (75 DUPLICATES REMOVED)

=> s 14 and ((75 kd?)or(gene 5074)or(27 kd?)or(gene 5669)or(62 kd?)or(gene 4423)or(57 kd?)or(gene 3123)or(74 kd?)or(gene 5293)or(44 kd?)or(gene 5464)or(43 kd?)or(gene 5473)or(gene 4320) or(101 kd?)or(gene 2008))

L5 3 L4 AND ((75 KD?) OR(GENE 5074) OR(27 KD?) OR(GENE 5669) OR(62 KD?) OR(GENE 4423) OR(57 KD?) OR(GENE 3123) OR(74 KD?) OR(GENE 5293) OR(44 KD?) OR(GENE 5464) OR(43 KD?) OR(GENE 5473) OR(GENE 4320) OR(101 KD?) OR(GENE 2008))

=> dup rem 15
PROCESSING COMPLETED FOR L5

L6 3 DUP REM L5 (0 DUPLICATES REMOVED)

=> d bib ab kwic 1-
YOU HAVE REQUESTED DATA FROM 3 ANSWERS - CONTINUE? Y/(N):y

L6 ANSWER 1 OF 3 CABA COPYRIGHT 2010 CABI on STN
AN 2010:191515 CABA <<LOGINID::20100916>>
DN 20103183448
TI Analysis of antigenicity in four antigenic candidate genes of ***Lawsonia*** ***intracellularis*** GXNN strain
AU Xiao AiHuan; Xie LiHua; Liao ChengQiu; Lan JiaNuan; Li MaoNing; Hou ShaoYi; Lu ShiYong; Huang WeiJian; Xiao, A. H.; Xie, L. H.; Liao, C. Q.; Lan, J. N.; Li, M. N.; Hou, S. Y.; Lu, S. Y.; Huang, W. J.
CS College of Animal Science and Technology, Guangxi University, Nanning 530005, China. huangweijian-1@163.com
SO Guangxi Agricultural Sciences, (2010) Vol. 41, No. 1, pp. 62-65. 6 ref.
Publisher: Editorial Department of Guangxi Agricultural Sciences. Guangxi ISSN: 1002-8161
URL: <http://www.gxaas.net>
CY China
DT Journal
LA Chinese
SL English
ED Entered STN: 9 Aug 2010
Last Updated on STN: 9 Aug 2010
AB According to the associated protein sequences of ***Lawsonia*** intracellulars published in GenBank, four pairs of primers were designed and the genes of three outer membrane proteins and one ectal lipoprotein were amplified. After constructing the prokaryotic expression vectors for four antigenic candidate genes, the prokaryotic expression, SDS-PAGE electrophoresis and Western blotting analysis were performed. The results showed that two recombination fusion proteins pET32a-LI0902 and pET32a-LI1022 could be expressed and ***57*** ***kDa*** and 37 kDa band was obtained by SDS-PAGE electrophoresis, respectively. The Western blotting analysis results showed that pET32a-LI1022 had antigenicity. These results for the first time proved that whether outer membrane proteins of ***Lawsonia*** ***intracellularis*** had antigenicity or not, and would provide theoretical basis for developing diagnostic kit and genetically engineered ***vaccine*** .
TI Analysis of antigenicity in four antigenic candidate genes of ***Lawsonia*** ***intracellularis*** GXNN strain.
AB According to the associated protein sequences of ***Lawsonia*** intracellulars published in GenBank, four pairs of primers were designed and the genes of three outer membrane proteins and one. . . Western

blotting analysis were performed. The results showed that two recombination fusion proteins pET32a-LI0902 and pET32a-LI1022 could be expressed and ***57*** ***kDa*** and 37 kDa band was obtained by SDS-PAGE electrophoresis, respectively. The Western blotting analysis results showed that pET32a-LI1022 had antigenicity. These results for the first time proved that whether outer membrane proteins of ***Lawsonia*** ***intracellularis*** had antigenicity or not, and would provide theoretical basis for developing diagnostic kit and genetically engineered ***vaccine***.

BT ***Lawsonia*** (Bacteria); Desulfovibrionaceae; Desulfovibrionales; Deltaproteobacteria; Proteobacteria; Bacteria; prokaryotes
 ORGN ***Lawsonia*** ***intracellularis***

L6 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2010 ACS on STN
 AN 2005:696935 CAPLUS <>LOGINID::20100916>>
 DN 143:192288
 TI DNA and polypeptides of ***Lawsonia*** ***intracellularis*** immunogenic proteins, their sequences and use in manufacturing of pig ***vaccines*** against L. ***intracellularis***

IN Vermeij, Paul
 PA Akzo Nobel N. V., Neth.
 SO PCT Int. Appl., 99 pp.
 CODEN: PIXXD2

DT Patent
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005070958	A2	20050804	WO 2005-EP562	20050118
	WO 2005070958	A3	20051124		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, SM				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2005206291	A1	20050804	AU 2005-206291	20050118
	AU 2005206291	B2	20100603		
	CA 2554472	A1	20050804	CA 2005-2554472	20050118
	EP 1709067	A2	20061011	EP 2005-701094	20050118
	EP 1709067	B1	20100609		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS				
	BR 2005007017	A	20070605	BR 2005-7017	20050118
	JP 2007537721	T	20071227	JP 2006-550044	20050118
	AT 470673	T	20100615	AT 2005-701094	20050118
	MX 2006008217	A	20070523	MX 2006-8217	20060719
	KR 2006134054	A	20061227	KR 2006-715908	20060807
	US 20090053228	A1	20090226	US 2008-587067	20081105
PRAI	EP 2004-100202	A	20040122		
	EP 2004-100203	A	20040122		
	EP 2004-100204	A	20040122		

EP 2004-100205	A	20040122
EP 2004-100206	A	20040122
EP 2004-100208	A	20040122
EP 2004-100209	A	20040122
EP 2004-100210	A	20040122
EP 2004-100211	A	20040122
WO 2005-EP562	W	20050118

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The invention provides DNA mols. and polypeptides of various

Lawsonia ***intracellularis*** immunogenic proteins that were demonstrated to bind to polyclonal pig and chicken serum. The invention relates that said immunogenic proteins possessed mol. wts. of 75-kilodaltons (kDa), ***27*** - ***kDa*** , ***62*** - ***kDa*** , ***57*** - ***kDa*** , ***74*** - ***kDa*** , ***44*** - ***kDa*** , ***43*** - ***kDa*** , 26/31-kDa and ***101*** - ***KDa*** , based on SDS-PAGE gel electrophoresis. The invention also provides for the use of said DNA mols. and polypeptides in manufg. of a ***vaccine*** for combating L. ***intracellularis*** infections in pigs by inducing humoral immunity. The invention further provides antibodies specific for said L. ***intracellularis*** immunogenic proteins, their detection and their use in manufg. of a ***vaccine*** and/or in diagnosis. Still further, the invention provides a ***vaccine*** comprising said L. ***intracellularis*** DNA mols.

and

polypeptides and an addnl. antigen derived from pig pathogens, such as viruses and/or microorganisms. Finally, the invention provides the DNA and amino acid sequences of said L. ***intracellularis*** immunogenic proteins. In the examples, the invention demonstrated that pigs immunized with a recombinant ***vaccine*** composed of disclosed ***75*** - ***kDa*** , ***44*** - ***kDa*** , 26/31-kDa and ***27*** - ***kDa*** immunogenic proteins were protected against an L. ***intracellularis*** challenge.

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

TI DNA and polypeptides of ***Lawsonia*** ***intracellularis*** immunogenic proteins, their sequences and use in manufacturing of pig ***vaccines*** against L. ***intracellularis***

AB The invention provides DNA mols. and polypeptides of various ***Lawsonia*** ***intracellularis*** immunogenic proteins that were demonstrated to bind to polyclonal pig and chicken serum. The invention relates that said immunogenic proteins possessed mol. wts. of 75-kilodaltons (kDa), ***27*** - ***kDa*** , ***62*** - ***kDa*** , ***57*** - ***kDa*** , ***74*** - ***kDa*** , ***44*** - ***kDa*** , ***43*** - ***kDa*** , 26/31-kDa and ***101*** - ***KDa*** , based on SDS-PAGE gel electrophoresis. The invention also provides for the use of said DNA mols. and polypeptides in manufg. of a ***vaccine*** for combating L. ***intracellularis*** infections in pigs by inducing humoral immunity. The invention further provides antibodies specific for said L. ***intracellularis*** immunogenic proteins, their detection and their use in manufg. of a ***vaccine*** and/or in diagnosis. Still further, the invention provides a ***vaccine*** comprising said L. ***intracellularis*** DNA mols.

and

polypeptides and an addnl. antigen derived from pig pathogens, such as viruses and/or microorganisms. Finally, the invention provides the DNA and amino acid sequences of said L. ***intracellularis*** immunogenic proteins. In the examples, the invention demonstrated that pigs immunized with a recombinant ***vaccine*** composed of disclosed ***75*** -

****kDa*** , ***44*** - ****kDa*** , 26/31-kDa and ***27*** -
****kDa*** immunogenic proteins were protected against an L.
****intracellularis*** challenge.

ST DNA sequence immunogenic protein gene ***Lawsonia*** use
****vaccine*** ; ***Lawsonia*** antigen sequence recombinant prodn
use
****vaccine*** diagnosis; antibody anti ***Lawsonia*** antigen use
diagnosis ***vaccine*** manuf; pig humoral immunity ***Lawsonia***
immunogenic protein ***vaccine***

IT Antigens
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic
preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic
use); ANST (Analytical study); BIOL (Biological study); PREP
(Preparation); USES (Uses)
(101-kilodalton; ***Lawsonia*** ***intracellularis***
immunogenic proteins, their sequences, recombinant prodn., diagnostic
detection and use in manufg. of ***vaccines***)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); USES (Uses)
(2008; DNA and polypeptides of ***Lawsonia***
intracellularis immunogenic proteins, their sequences and use
in manufg. of ***vaccines*** against L. ***intracellularis***)

IT Antigens
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic
preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic
use); ANST (Analytical study); BIOL (Biological study); PREP
(Preparation); USES (Uses)
(26/31-kilodalton; ***Lawsonia*** ***intracellularis***
immunogenic proteins, their sequences, recombinant prodn., diagnostic
detection and use in manufg. of ***vaccines***)

IT Antigens
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic
preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic
use); ANST (Analytical study); BIOL (Biological study); PREP
(Preparation); USES (Uses)
(27-kilodalton; ***Lawsonia*** ***intracellularis***
immunogenic proteins, their sequences, recombinant prodn., diagnostic
detection and use in manufg. of ***vaccines***)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); USES (Uses)
(3123; DNA and polypeptides of ***Lawsonia***
intracellularis immunogenic proteins, their sequences and use
in manufg. of ***vaccines*** against L. ***intracellularis***)

IT Antigens
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic
preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic
use); ANST (Analytical study); BIOL (Biological study); PREP
(Preparation); USES (Uses)
(43-kilodalton; ***Lawsonia*** ***intracellularis***
immunogenic proteins, their sequences, recombinant prodn., diagnostic
detection and use in manufg. of ***vaccines***)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); USES (Uses)
(4320; DNA and polypeptides of ***Lawsonia***

intracellularis immunogenic proteins, their sequences and use
 in manufg. of ***vaccines*** against L. ***intracellularis***)

IT Antigens
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (44-kilodalton; ***Lawsonia*** ***intracellularis***
 immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of ***vaccines***)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (4423; DNA and polypeptides of ***Lawsonia***
 intracellularis immunogenic proteins, their sequences and use
 in manufg. of ***vaccines*** against L. ***intracellularis***)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (5074; DNA and polypeptides of ***Lawsonia***
 intracellularis immunogenic proteins, their sequences and use
 in manufg. of ***vaccines*** against L. ***intracellularis***)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (5293; DNA and polypeptides of ***Lawsonia***
 intracellularis immunogenic proteins, their sequences and use
 in manufg. of ***vaccines*** against L. ***intracellularis***)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (5464; DNA and polypeptides of ***Lawsonia***
 intracellularis immunogenic proteins, their sequences and use
 in manufg. of ***vaccines*** against L. ***intracellularis***)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (5473; DNA and polypeptides of ***Lawsonia***
 intracellularis immunogenic proteins, their sequences and use
 in manufg. of ***vaccines*** against L. ***intracellularis***)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (5669; DNA and polypeptides of ***Lawsonia***
 intracellularis immunogenic proteins, their sequences and use
 in manufg. of ***vaccines*** against L. ***intracellularis***)

IT Antigens
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (57-kilodalton; ***Lawsonia*** ***intracellularis***
 immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of ***vaccines***)

IT Antigens
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic

use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(62-kilodalton; ***Lawsonia*** ***intracellularis***
immunogenic proteins, their sequences, recombinant prodn., diagnostic
detection and use in manufg. of ***vaccines***)

IT Antigens
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic
preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic
use); ANST (Analytical study); BIOL (Biological study); PREP
(Preparation); USES (Uses)
(74-kilodalton; ***Lawsonia*** ***intracellularis***
immunogenic proteins, their sequences, recombinant prodn., diagnostic
detection and use in manufg. of ***vaccines***)

IT Antigens
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic
preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic
use); ANST (Analytical study); BIOL (Biological study); PREP
(Preparation); USES (Uses)
(75-kilodalton; ***Lawsonia*** ***intracellularis***
immunogenic proteins, their sequences, recombinant prodn., diagnostic
detection and use in manufg. of ***vaccines***)

IT DNA sequences
Lawsonia ***intracellularis***

Protein sequences
(DNA and polypeptides of ***Lawsonia*** ***intracellularis***
immunogenic proteins, their sequences and use in manufg. of
vaccines against L. ***intracellularis***)

IT ***Vaccines***
(DNA and protein; DNA and polypeptides of ***Lawsonia***
intracellularis immunogenic proteins, their sequences and use
in manufg. of ***vaccines*** against L. ***intracellularis***)

IT Molecular cloning
(***Lawsonia*** ***intracellularis*** immunogenic proteins,
their sequences, recombinant prodn., diagnostic detection and use in
manufg. of ***vaccines***)

IT Promoter (genetic element)
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(***Lawsonia*** ***intracellularis*** immunogenic proteins,
their sequences, recombinant prodn., diagnostic detection and use in
manufg. of ***vaccines***)

IT Immunostimulants
(adjuvants, of ***vaccine*** ; DNA and polypeptides of
Lawsonia ***intracellularis*** immunogenic proteins, their
sequences and use in manufg. of ***vaccines*** against L.
intracellularis)

IT Antibodies and Immunoglobulins
RL: ANT (Analyte); ARG (Analytical reagent use); DGN (Diagnostic use); THU
(Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES
(Uses)
(anti-L. ***intracellularis*** antigen-specific; antibodies specific
for ***Lawsonia*** ***intracellularis*** immunogenic proteins,
their detection, diagnostic use and use in manufg. of ***vaccine***
)

IT Actinobacillus pleuropneumoniae
Bordetella bronchiseptica
Brachyspira hyodysenteriae

Erysipelothrix rhusiopathiae
Haemophilus parasuis
Mycoplasma hyopneumoniae
Pasteurella multocida
Porcine parvovirus
Porcine transmissible gastroenteritis virus
Pseudorabies virus
Rotavirus
Salmonella choleraesuis
Streptococcus suis
Swine influenza virus
(antigen from; ***vaccines*** composed of ***Lawsonia***
intracellularis immunogenic proteins and/or DNA encoding said
proteins, and antigens from various pig pathogens, such as)

IT Antigens
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL
(Biological study); PREP (Preparation); USES (Uses)
(from various pig pathogens; ***vaccines*** composed of
Lawsonia ***intracellularis*** immunogenic proteins and/or
DNA encoding said proteins, and antigens from various pig pathogens,
such as)

IT Immunity
(humoral; pigs immunized with ***vaccine*** composed of
Lawsonia ***intracellularis*** ***75*** - ***kDa*** ,
44 - ***kDa*** , 26/31-kDa and ***27*** - ***kDa***
immunogenic proteins protected against challenge with L.
intracellularis)

IT Diagnosis
(immunodiagnosis, using antibodies; antibodies specific for
Lawsonia ***intracellularis*** immunogenic proteins, their
detection, diagnostic use and use in manufg. of ***vaccine***)

IT Sus scrofa domestica
(pigs immunized with ***vaccine*** composed of ***Lawsonia***
intracellularis ***75*** - ***kDa*** , ***44*** -
kDa , 26/31-kDa and ***27*** - ***kDa*** immunogenic
proteins protected against challenge with L. ***intracellularis***)

IT Intestine, disease
(porcine proliferative; pigs immunized with ***vaccine*** composed
of ***Lawsonia*** ***intracellularis*** ***75*** -
kDa , ***44*** - ***kDa*** , 26/31-kDa and ***27*** -
kDa immunogenic proteins protected against challenge with L.
intracellularis)

IT Escherichia coli
(transformed; ***Lawsonia*** ***intracellularis*** immunogenic
proteins, their sequences, recombinant prodn., diagnostic detection and
use in manufg. of ***vaccines***)

IT Immunization
(***vaccination*** ; DNA and polypeptides of ***Lawsonia***
intracellularis immunogenic proteins, their sequences and use
in manufg. of ***vaccines*** against L. ***intracellularis***)

IT 861866-19-5P 861866-21-9P 861866-23-1P 861866-25-3P 861866-27-5P
861866-29-7P 861866-31-1P 861866-34-4P 861866-36-6P
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic
preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic
use); ANST (Analytical study); BIOL (Biological study); PREP
(Preparation); USES (Uses)
(amino acid sequence; ***Lawsonia*** ***intracellularis***

immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of ***vaccines***)

IT 861866-20-8 861866-22-0 861866-24-2 861866-26-4 861866-28-6
 861866-30-0 861866-32-2 861866-33-3 861866-35-5
 RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (nucleotide sequence; DNA and polypeptides of ***Lawsonia***
 intracellularis immunogenic proteins, their sequences and use in manufg. of ***vaccines*** against L. ***intracellularis***)

IT 861867-47-2
 RL: PRP (Properties)
 (unclaimed nucleotide sequence; dNA and polypeptides of ***Lawsonia***
 intracellularis immunogenic proteins, their sequences and use in manufg. of pig ***vaccines*** against L.
 intracellularis)

IT 861867-48-3 861867-49-4 861867-50-7 861867-51-8 861867-52-9
 861867-53-0 861867-54-1 861867-55-2 861867-56-3 861867-57-4
 861867-58-5 861867-59-6 861867-60-9 861867-61-0 861867-62-1
 861867-63-2 861867-64-3
 RL: PRP (Properties)
 (unclaimed sequence; dNA and polypeptides of ***Lawsonia***
 intracellularis immunogenic proteins, their sequences and use in manufg. of pig ***vaccines*** against L. ***intracellularis***)

L6 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2010 ACS on STN
 AN 2002:256061 CAPLUS <>LOGINID::20100916>>
 DN 136:261820
 TI Swine ***vaccines*** for proliferative ileitis comprising
 Lawsonia ***intracellularis*** antigens
 PA University of Arizona, Board of Regents, USA
 SO PCT Int. Appl., 43 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002026250	A2	20020404	WO 2001-US30284	20010927
	WO 2002026250	A3	20030501		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2423588	A1	20020404	CA 2001-2423588	20010927
	AU 2001093151	A	20020408	AU 2001-93151	20010927
	EP 1324768	A2	20030709	EP 2001-973589	20010927
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
HU	2003003655	A2	20040301	HU 2003-3655	20010927
JP	2004529854	T	20040930	JP 2002-530080	20010927
AU	2001293151	B2	20051201	AU 2001-293151	20010927

US 20060193874 A1 20060831 US 2005-181484 20050714
PRAI US 2000-677108 A 20000929
WO 2001-US30284 W 20010927

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB A proliferative ileitis ***vaccine*** comprising tissue culture grown ***Lawsonia*** ***intracellularis*** and methods of making said ***vaccines*** . Proliferative ileitis ***vaccines*** described include those contg. whole L. ***intracellularis*** , exts. of L. ***intracellularis*** , protective immunogenic submts of L. ***intracellularis*** , recombinant immunogens of L. ***intracellularis*** and naked DNA of L. ***intracellularis*** . The ***vaccines*** of this invention may be inactivated or modified live and contain adjuvants and/or stabilizers. The ***vaccines*** of this invention may be in a liq. or lyophilized form. Also disclosed are monoclonal antibodies which neutralize the growth of L. ***intracellularis*** and which may be used for diagnosing proliferative ileitis as well as for quantitating antigen during ***vaccine*** prodn.

OSC.G 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Swine ***vaccines*** for proliferative ileitis comprising ***Lawsonia*** ***intracellularis*** antigens

AB A proliferative ileitis ***vaccine*** comprising tissue culture grown ***Lawsonia*** ***intracellularis*** and methods of making said ***vaccines*** . Proliferative ileitis ***vaccines*** described include those contg. whole L. ***intracellularis*** , exts. of L. ***intracellularis*** , protective immunogenic submts of L. ***intracellularis*** , recombinant immunogens of L. ***intracellularis*** and naked DNA of L. ***intracellularis*** . The ***vaccines*** of this invention may be inactivated or modified live and contain adjuvants and/or stabilizers. The ***vaccines*** of this invention may be in a liq. or lyophilized form. Also disclosed are monoclonal antibodies which neutralize the growth of L. ***intracellularis*** and which may be used for diagnosing proliferative ileitis as well as for quantitating antigen during ***vaccine*** prodn.

ST ***vaccine*** proliferative ileitis ***Lawsonia*** antigen antibody swine

IT Antigens
RL: ANT (Analyte); PAC (Pharmacological activity); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(115-kDa; ***vaccines*** for proliferative ileitis comprising ***Lawsonia*** ***intracellularis*** antigens which produce antibodies in swine)

IT Antigens
RL: ANT (Analyte); PAC (Pharmacological activity); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(21-kDa; ***vaccines*** for proliferative ileitis comprising ***Lawsonia*** ***intracellularis*** antigens which produce antibodies in swine)

IT Antigens
RL: ANT (Analyte); PAC (Pharmacological activity); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(31-kDa; ***vaccines*** for proliferative ileitis comprising

Lawsonia ***intracellularis*** antigens which produce
 antibodies in swine)

IT Antigens
RL: ANT (Analyte); PAC (Pharmacological activity); THU (Therapeutic use);
ANST (Analytical study); BIOL (Biological study); USES (Uses)
(41-kDa; ***vaccines*** for proliferative ileitis comprising
 Lawsonia ***intracellularis*** antigens which produce
 antibodies in swine)

IT Antigens
RL: ANT (Analyte); PAC (Pharmacological activity); THU (Therapeutic use);
ANST (Analytical study); BIOL (Biological study); USES (Uses)
(***43*** - ***kDa*** ; ***vaccines*** for proliferative
 ileitis comprising ***Lawsonia*** ***intracellularis***
 antigens which produce antibodies in swine)

IT Antigens
RL: ANT (Analyte); PAC (Pharmacological activity); THU (Therapeutic use);
ANST (Analytical study); BIOL (Biological study); USES (Uses)
(***44*** - ***kDa*** ; ***vaccines*** for proliferative
 ileitis comprising ***Lawsonia*** ***intracellularis***
 antigens which produce antibodies in swine)

IT Antigens
RL: ANT (Analyte); PAC (Pharmacological activity); THU (Therapeutic use);
ANST (Analytical study); BIOL (Biological study); USES (Uses)
(60-kDa; ***vaccines*** for proliferative ileitis comprising
 Lawsonia ***intracellularis*** antigens which produce
 antibodies in swine)

IT Antigens
RL: ANT (Analyte); PAC (Pharmacological activity); THU (Therapeutic use);
ANST (Analytical study); BIOL (Biological study); USES (Uses)
(71-kDa; ***vaccines*** for proliferative ileitis comprising
 Lawsonia ***intracellularis*** antigens which produce
 antibodies in swine)

IT Antigens
RL: ANT (Analyte); PAC (Pharmacological activity); THU (Therapeutic use);
ANST (Analytical study); BIOL (Biological study); USES (Uses)
(>115-kDa; ***vaccines*** for proliferative ileitis comprising
 Lawsonia ***intracellularis*** antigens which produce
 antibodies in swine)

IT Immunostimulants
(adjuvants; ***vaccines*** for proliferative ileitis comprising
 Lawsonia ***intracellularis*** antigens which produce
 antibodies in swine)

IT Lipids, biological studies
Polymers, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(as adjuvant; ***vaccines*** for proliferative ileitis comprising
 Lawsonia ***intracellularis*** antigens which produce
 antibodies in swine)

IT Detergents
Heat
(as inactivating agent; ***vaccines*** for proliferative ileitis
 comprising ***Lawsonia*** ***intracellularis*** antigens which
 produce antibodies in swine)

IT Temperature
(cold, as inactivating agent; ***vaccines*** for proliferative
 ileitis comprising ***Lawsonia*** ***intracellularis***
 antigens which produce antibodies in swine)

IT Immunoassay
(enzyme-linked immunosorbent assay; ***vaccines*** for proliferative ileitis comprising ***Lawsonia*** ***intracellularis*** antigens which produce antibodies in swine)

IT Inflammation
Intestine, disease
(ileitis, proliferative; ***vaccines*** for proliferative ileitis comprising ***Lawsonia*** ***intracellularis*** antigens which produce antibodies in swine)

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(monoclonal; ***vaccines*** for proliferative ileitis comprising ***Lawsonia*** ***intracellularis*** antigens which produce antibodies in swine)

IT Emulsions
(oil-in-water, as adjuvant; ***vaccines*** for proliferative ileitis comprising ***Lawsonia*** ***intracellularis*** antigens which produce antibodies in swine)

IT Diagnosis
Epitopes
Fluorescence immunoassay
Genetic vectors
Lawsonia ***intracellularis***
PCR (polymerase chain reaction)
Sus scrofa domestica
Vaccines
(***vaccines*** for proliferative ileitis comprising ***Lawsonia*** ***intracellularis*** antigens which produce antibodies in swine)

IT Antigens
RL: ANT (Analyte); PAC (Pharmacological activity); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(***vaccines*** for proliferative ileitis comprising ***Lawsonia*** ***intracellularis*** antigens which produce antibodies in swine)

IT Antibodies and Immunoglobulins
DNA
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(***vaccines*** for proliferative ileitis comprising ***Lawsonia*** ***intracellularis*** antigens which produce antibodies in swine)

IT Emulsions
(water-in-oil-in-water, as adjuvant; ***vaccines*** for proliferative ileitis comprising ***Lawsonia*** ***intracellularis*** antigens which produce antibodies in swine)

IT 9003-01-4D, crosslinked
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Carbopol, as adjuvant; ***vaccines*** for proliferative ileitis comprising ***Lawsonia*** ***intracellularis*** antigens which produce antibodies in swine)

IT 7784-30-7, Aluminum phosphate 10043-01-3, Aluminum sulfate 21645-51-2, Aluminum hydroxide, biological studies 189200-69-9, Polygen 210692-07-2, Emulsigen 405075-93-6, Havlogen 405076-88-2, Emulsigen Plus
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(as adjuvant; ***vaccines*** for proliferative ileitis comprising ***Lawsonia*** ***intracellularis*** antigens which produce antibodies in swine)

IT 50-00-0, Formalin, biological studies 57-57-8, .beta.-Propiolactone
27233-25-6, Ethylenimine dimer

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(as inactivating agent; ***vaccines*** for proliferative ileitis comprising ***Lawsonia*** ***intracellularis*** antigens which produce antibodies in swine)